



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-0156; Project Identifier MCAI-2022-01511-T; Amendment 39-22454; AD 2023-11-08]

RIN 2120-AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2022-19-05, which applied to all Airbus SAS Model A330-841 and -941 airplanes. AD 2022-19-05 required maintenance actions, including a high pressure valve (HPV) seal integrity test, repetitive replacement of the HPV clips, revision of the existing airplane flight manual (AFM), and implementation of updates to the FAA-approved operator's minimum equipment list (MEL). This AD was prompted by additional instructions and maintenance procedures developed to address failures of the HPV. This AD continues to require certain actions in AD 2022-19-05 and provides additional criteria for the installation of HPV and HPV clips, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0156; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For material incorporated by reference in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email: ADs@easa.europa.eu; website: easa.europa.eu. You may find this material on the EASA website: ad.easa.europa.eu.

- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th Street, Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0156.

FOR FURTHER INFORMATION CONTACT: Vladimir Ulyanov, Aviation Safety Engineer, FAA, International Validation Branch, 2200 South 216th Street, Des Moines, WA 98198; telephone 206-231-3229; email Vladimir.Ulyanov@faa.gov.

SUPPLEMENTARY INFORMATION:**Background**

On August 18, 2022, the FAA issued Emergency AD 2022-18-51 for all Airbus SAS Model A330-841 and -941 airplanes. Emergency AD 2022-18-51 corresponded to EASA Emergency AD 2022-0170-E, dated August 17, 2022 (EASA Emergency AD 2022-0170-E). EASA is the Technical Agent for the Member States of the European

Union. Emergency AD 2022-18-51 required revising the existing AFM to incorporate additional limitations prohibiting takeoff for certain airplane configurations; specified airplane dispatch restrictions using certain provisions of the A330 MMEL (master minimum equipment list) or amending the existing FAA-approved operator's MEL; and required obtaining and accomplishing instructions following certain maintenance messages. The FAA issued Emergency AD 2022-18-51 to address a leaking HPV, which may expose the pressure regulating valve (PRV), which is installed downstream from the HPV, to high pressure, possibly damaging the PRV itself and preventing its closure. The unsafe condition, if not addressed, could result in high pressure and temperatures in the duct downstream from the PRV, with possible duct burst, damage to several systems, and consequent loss of control of the airplane.

Since the FAA issued Emergency AD 2022-18-51, EASA superseded its Emergency AD 2022-0170-E and issued EASA AD 2022-0181, dated August 29, 2022 (EASA AD 2022-0181), to correct an unsafe condition for all Airbus SAS A330-841 and -941 airplanes. The FAA issued AD 2022-19-05, Amendment 39-22174 (87 FR 54870, September 8, 2022) (AD 2022-19-05), for all Airbus SAS Model A330-841 and -941 airplanes. AD 2022-19-05 was prompted by EASA AD 2022-0181, which was intended to address leaking bleed system HPVs, likely due to HPV clip failure and sealing ring damage.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2022-19-05, Amendment 39-22174 (87 FR 54870, September 8, 2022) (AD 2022-19-05). AD 2022-19-05 applied to all Airbus SAS Model A330-841 and -941 airplanes. AD 2022-19-05 required revising the existing AFM to incorporate additional limitations prohibiting takeoff for certain airplane configurations; specifies airplane dispatch restrictions using certain provisions of the A330 MMEL (master minimum equipment list) or amending the existing FAA-approved operator's MEL;

requires obtaining and accomplishing instructions following certain maintenance messages; revising the Limitations section of the AFM; updating the A330 MMEL with new provisions and procedures; a seal integrity test of each HPV; and a detailed inspection of the wing bellows. The FAA issued AD 2022-19-05 to address a leaking HPV, which may expose the PRV, which is installed downstream from the HPV, to high pressure, possibly damaging the PRV itself and preventing its closure.

The NPRM published in the *Federal Register* on February 3, 2023 (88 FR 7370). The NPRM was prompted by AD 2022-0227, dated November 24, 2022, issued by EASA (EASA AD 2022-0227) (also referred to as the MCAI). EASA AD 2022-0227 states that Airbus has since published improved instructions and maintenance procedures to address failures of the HPV and incorporate comments received. You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-0156.

In the NPRM, the FAA proposed to retain certain requirements of AD 2022-19-05 and provide additional criteria for the installation of HPV and HPV clips. Those requirements are referenced in EASA AD 2022-0227, which, in turn, is referenced in paragraph (g) of this AD. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Air Line Pilots Association, International (ALPA) who supported the NPRM without change.

The FAA received an additional comment from Delta Air Lines (Delta). The following presents the comment received on the NPRM and the FAA's response to that comment.

Request for an Additional Exception for Revised Publication

Delta requested an exception be added to paragraph (h) to use Airbus Alert Operators Transmission (AOT) A36L009-22, original issue, dated August 25, 2022, for compliance with the EASA AD 2022-0227, instead of Airbus AOT A36L009-22, Revision 01, dated October 3, 2022.

The FAA disagrees that updating this final rule is necessary because EASA AD 2022-0227, which is required by this AD, allows credit for the original issue in paragraph (16) of EASA AD 2022-0227.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information Under 1 CFR Part 51

EASA AD 2022-0227 specifies procedures for the following actions:

- Revision of the Limitations section of the existing AFM and removal of the previously required limitations.
- Implementation of the instructions of the MMEL update on the basis of which the operator's MEL must be amended with new provisions and procedures for the following items: Air Conditioning Pack, Engine Bleed Air Supply System, Engine Bleed IP (Intermediate Pressure) Check Valve, and Engine Bleed HP (High Pressure) Valve,

and cancel the dispatch restrictions.

- A seal integrity test of each HPV, and corrective actions (including replacement of the HPV, and a detailed inspection of the wing bellow on engine 1(2) and replacement of any damaged or deformed wing bellow).

EASA AD 2022-0227 also describes the following maintenance instructions, among other actions, to be accomplished following certain faults or failures:

- HPV troubleshooting procedure and additional maintenance actions after any Class 1 maintenance message associated to an HPV fault, and corrective actions (including replacement of the HPV or wing bellow).

- HPV seal integrity test and the additional maintenance actions after any Class 1 or Class 2 maintenance message associated to a PRV fault, and corrective actions (including replacement of the HPV and PRV, and a detailed inspection of the wing bellow on engine 1(2) and replacement of any damaged or deformed wing bellow).

- A visual (borescope) inspection of the engine bleed air system (EBAS) to detect signs of foreign object debris (FOD), including metallic debris in the butterfly valve and dents or damage of the flaps of the intermediate pressure check valve (IPCV), and dents and missing segments in the PRV, the header of the HP/IP duct, the y-duct, and the pylon ducts after any failure of an HPV clip and/or any of the HPV butterfly sealing rings, and corrective actions (including removing FOD and replacing the IPCV or PRV).

- A seal integrity test of each HPV after any take-off or go-around accomplished with “packs OFF” or “APU bleed ON” or “engine bleed OFF,” and corrective actions (including replacement of the HPV, and a detailed inspection of the wing bellow on engine 1(2) and replacement of any damaged or deformed wing bellow).

- Additional actions to be performed for any Class 1 maintenance message associated with an HPV fault.

- Initial and repetitive replacement of each HPV clip with a new HPV clip.

EASA AD 2022-0227 also specifies that HPV clips may be installed provided they are new and serviceable, and replaced before exceeding 4,000 hours time-in-service.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Interim Action

The FAA considers that this AD is an interim action. The FAA anticipates that further AD action may follow.

Costs of Compliance

The FAA estimates that this AD affects 19 airplanes of U.S. registry. The new requirements of this AD add no additional economic burden. The current costs for this AD are repeated for the convenience of affected operators, as follows:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
AFM revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$1,615
MEL update	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$1,615
HPV Seal Integrity Test	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$1,615
HPV clip replacement (both engines)	11 work-hours X \$85 per hour = \$935	\$28	\$963	\$18,297

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need these on-condition actions:

Estimated costs of on-condition actions

Action	Labor cost	Parts cost	Cost per product
HPV replacement (each)	4 work-hours X \$85 per hour = \$340	\$6,459	\$6,799
Wing bellow replacement (each wing)	6 work-hours X \$85 per hour = \$510	\$663	\$1,173
PRV replacement (both engines)	9 work-hours X \$85 per hour = \$765	\$107,620	\$108,385

The FAA has received no definitive data on which to base the cost estimates for the maintenance actions or additional actions specified in this AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

- a. Removing Airworthiness Directive 2022-19-05, Amendment 39-22174 (87 FR 54870, dated September 8, 2022); and

- b. Adding the following new AD:

2023-11-08 Airbus SAS: Amendment 39-22454; Docket No. FAA-2023-0156; Project Identifier MCAI-2022-01511-T.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2022-19-05, Amendment 39-22174 (87 FR 54870, September 8, 2022) (AD 2022-19-05).

(c) Applicability

This AD applies to all Airbus SAS Model A330-841 and -941 airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code: 36, Pneumatic; 75, Air.

(e) Unsafe Condition

This AD was prompted by reports of leaking bleed system high pressure valves (HPVs), likely due to HPV clip failure and sealing ring damage, and by the development of additional instructions and maintenance procedures to address HPV failures. The FAA is issuing this AD to address a leaking HPV, which may expose the pressure regulating valve (PRV), which is installed downstream from the HPV, to high pressure, possibly damaging the PRV itself and preventing its closure. The unsafe condition, if not addressed, could result in high pressure and temperatures in the duct downstream from the PRV, with possible duct burst, damage to several systems, and consequent loss of control of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2022-0227, dated November 24, 2022 (EASA AD 2022-0227).

(h) Exceptions to EASA AD 2022-0227

(1) Where EASA AD 2022-0227 refers to “05 September 2022 [the effective date of EASA AD 2022-0181],” this AD requires using September 15, 2022 (the effective date of AD 2022-19-05).

(2) Where EASA AD 2022-0227 refers to its effective date, this AD requires using the effective date of this AD.

(3) Where paragraphs (1) and (4) of EASA AD 2022-0227 specify to inform all flightcrews of airplane flight manual (AFM) revisions and dispatch limitations, and thereafter to operate the airplane accordingly, this AD does not require those actions, as those actions are already required by existing FAA regulations (see 14 CFR 91.9, 91.505, and 121.137).

(4) This AD does not adopt the reporting requirements of paragraph (17) of EASA AD 2022-0227.

(5) This AD does not adopt the “Remarks” section of EASA AD 2022-0227.

(i) Additional AD Provisions

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the International Validation Branch, send it to the attention of the person identified in paragraph (j) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(ii) AMOCs approved previously for AD 2022-19-05 are approved as AMOCs for the corresponding provisions of EASA AD 2022-0227 that are required by paragraph (g) of this AD.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method

approved by the Manager, International Validation Branch, FAA; or EASA; or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC)*: Except as required by paragraph(s) (i)(2) of this AD, if any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

(j) Additional Information

For more information about this AD, contact Vladimir Ulyanov, Aviation Safety Engineer, FAA, International Validation Branch, 2200 South 216th Street, Des Moines, WA 98198; telephone 206-231-3229; email Vladimir.Ulyanov@faa.gov.

(k) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2022-0227, dated November 24, 2022.

(ii) [Reserved]

(3) For EASA AD 2022-0227, contact EASA, Konrad-Adenauer-Ufer 3, 50668

Cologne, Germany; telephone +49 221 8999 000; email: ADs@easa.europa.eu; website: easa.europa.eu. You may find this EASA AD on the EASA website: ad.easa.europa.eu.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th Street, Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on June 2, 2023.

Michael Linegang, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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